NR 507 – **Week 3 Discussion**

**Purpose**

The purpose of this discussion is to apply pathophysiological concepts to an individual presenting with cardiovascular dysfunction (heart failure). Related concepts will also be applied that includes potential alterations in fluid and electrolytes and acid/base balance.

**Activity Learning Outcomes**

**Through this discussion, the student will demonstrate the ability to:**

1. Explore age-specific and developmental alterations in the cardiovascular system. (CO 3, 1)
2. Relate pathophysiological alterations in cardiovascular processes to the development, diagnosis and treatment of heart failure. (CO 4, 2)
3. Examine current evidence to support the management of patients who present with alterations in the cardiovascular system. (CO 5, 3)

**Total Points Possible:**100

**Requirements:**

A 64-year-old woman presents to the primary care office with shortness of breath, leg swelling, and fatigue. She has a history of type 2 diabetes and hypertension. She reports that recently she had been able to go for daily walks with her friends, but in the past month, the walks have become more difficult due to shortness of breath and fatigue. She also sometimes awakens in the middle of the night due to shortness of breath and has to prop herself up on three pillows. On physical examination, she is tachycardic (110 beats per minute) and has a blood pressure of 106/74 mm Hg. Fine crackles are noted on inspiration in bilateral bases. The cardiac exam reveals the presence of a third and fourth heart sound and jugular venous distension. 2+ pitting edema is noted in the knees bilaterally. An ECG shows sinus rhythm at 110 bpm with Q waves in the anterior leads. An echocardiogram shows decreased wall motion of the anterior wall of the heart and an estimated ejection fraction of 25%. She is diagnosed with systolic heart failure, secondary to a silent MI.

1. Discuss the pathophysiological mechanisms that can lead to heart failure.
2. Differentiate between systolic and diastolic heart dysfunction
3. Discuss the causes of the patient’s shortness of breath, awakening in the middle of the night and the need to prop herself up on three pillows. Include pathophysiological mechanisms that causes each of these signs and symptoms.
4. Include two points of teaching for this patient
5. Support your response with at least one current evidence based resource.
6. Students must post a minimum of three times in each graded discussion (see participation guidelines below).

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| **DISCUSSION CONTENT**  |
| **Category**  | **Points**  | **%**  | **Description**  |
| **Application of Course Knowledge**  | **30**  | **30%**  | 1. Posts make direct reference to concepts discussed in the lesson or drawn from relevant, evidence based outside sources, AND
2. Posts are on topic and answer all presented questions which demonstrates a solid understanding of the topic.
3. Applies concepts to personal experience in the professional setting and or relevant application to real life, AND
4. Decisions are well supported with evidence-based arguments that are in-line with the scenario; AND
5. Proper rationale and reasoning skills are demonstrated; AND
6. Information is taken from source(s) with appropriate interpretation/evaluation to develop a comprehensive analysis or synthesis of the topic
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| **Support From Evidence Based Practice**  | **30**  | **30%**  |  1. Discussion post is supported with appropriate, scholarly sources; AND
2. Sources are published within the last 5 years (unless it is the most current clinical practice guideline (CPG); AND
3. Reference list is provided and in-text citations match; AND
4. Provides relevant evidence of scholarly inquiry clearly stating how the evidence informed or changed professional or academic decisions
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| **Interactive Dialogue**  | **30**  | **30%**  | 1. Student provides a substantive\* response to at least two topic-related posts of a peer; AND
2. Evidence from appropriate scholarly sources are included; AND
3. Reference list is provided and in-text citations match; AND
4. Student responds to all direct faculty questions OR if student was not asked a direct question, student responds to either a 3rd peer post or a faculty question directed towards another student

 (\*) A substantive post adds new content or insights to the discussion thread and information from student’s original post is not reused in peer or faculty response  |
|   | **90**  | **90%**  | **Total CONTENT Points= 90 pts**  |
| **DISCUSSION FORMAT**  |
| **Category**  | **Points**  | **%**  | **Description**  |
| **Grammar, Syntax, Spelling, & Punctuation**   | **10**  | **10%**  | Grammar, spelling, and/or punctuation are accurate, or with zero to one error. Direct quotes in discussions are limited to one short quotation (not to exceed 15 words). The quote adds substantively to the discussion.  (\*) APA style references and in text citations are required; however, there are no deductions for errors in indentation or spacing of references. All elements of the reference otherwise must be included.  |
|   | **10**  | **10%**  | **Total FORMAT Points= 10 pts**  |
|   | **100**  | **100%**  | **DISCUSSION TOTAL=100 points**  |